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NOTICE OF ALLOWANCE AND FEE(S) DUE

27896 7590 04/01/2009

EDELL, SHAPIRO & FINNAN, LLC
1901 RESEARCH BOULEVARD
SUITE 400
ROCKVILLE, MD 20850

EXAMINER

FAROUL, FARAH

ART UNIT

PAPER NUMBER

2416

DATE MAILED: 04/01/2009

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/698,700

10/31/2003

Suresh Katukam

0370.0709C

1908

TITLE OF INVENTION: COMPUTING A DIVERSE PATH WHILE PROVIDING OPTIMAL USAGE OF LINE PROTECTED LINKS

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$0	\$0	\$1510	07/01/2009

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE
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P.O. Box 1450
Alexandria, Virginia 22313-1450
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INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

27896 7590 04/01/2009

EDELL, SHAPIRO & FINNAN, LLC
1901 RESEARCH BOULEVARD
SUITE 400
ROCKVILLE, MD 20850

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Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/698,700 10/31/2003 Suresh Katukam 0370.0709C 1908

TITLE OF INVENTION: COMPUTING A DIVERSE PATH WHILE PROVIDING OPTIMAL USAGE OF LINE PROTECTED LINKS

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
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nonprovisional NO \$1510 \$0 \$0 \$1510 07/01/2009

EXAMINER	ART UNIT	CLASS-SUBCLASS
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FAROUL, FARAH 2416 370-235000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____
- (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____
- 3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies _____

4b. Payment of Fee(s); (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,700	10/31/2003	Suresh Katukam	0370.0709C	1908
27896	7590	04/01/2009	EXAMINER	
EDEL, SHAPIRO & FINNAN, LLC 1901 RESEARCH BOULEVARD SUITE 400 ROCKVILLE, MD 20850			FAROUL, FARAH	
			ART UNIT	PAPER NUMBER
			2416	
DATE MAILED: 04/01/2009				

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 855 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 855 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Notice of Allowability	Application No.	Applicant(s)	
	10/698,700	KATUKAM, SURESH	
	Examiner	Art Unit	
	FARAH FAROUL	2416	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed on March 18, 2009.
2. ☒ The allowed claim(s) is/are 1-9, 11-15, and 18-30, renumbered 1-27, respectively.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: ____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date ____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| <ol style="list-style-type: none"> 1. <input type="checkbox"/> Notice of References Cited (PTO-892) 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date ____ 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | <ol style="list-style-type: none"> 5. <input type="checkbox"/> Notice of Informal Patent Application 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date ____. 7. <input type="checkbox"/> Examiner's Amendment/Comment 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance 9. <input type="checkbox"/> Other ____. |
|--|--|

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Lawrence D. Eisen on March 23, 2009.

Amendments to the claims:

Claim 1 (currently amended): A system for computing circuit paths between a first node and a second node within a network, the network including a plurality of elements, the system having a processor and at least one computer-readable medium storing computer-executable instructions and comprising:

a first set of computer-executable instructions creating a primary circuit path from the first node to the second node, the primary circuit path including at least one protected link selected from the plurality of elements, wherein the first set of computer-executable instructions is arranged to include the at least one protected link in a protectable segment of the primary circuit path; and

a second set of computer-executable instructions creating an alternate circuit path from the first node to the second node, wherein the alternate circuit path is arranged to protect at least the protectable segment of the primary circuit path, wherein the second set of computer executable instructions include:

a first subset of computer-executable instructions assigning a cost to at least one protected link;

a second subset of computer-executable instruction assigning costs associated to each link of a plurality of links included in the plurality of elements, wherein the cost assigned to the at least one protected link is lower than the costs associated with each link of the plurality of links; and

a third subset of computer-executable instruction considering costs associated with the plurality of links and the cost associated with the at least one protected link to determine the alternate circuit path.

Claim 11 (currently amended) A method for computing an overall circuit path within a network, the overall circuit path including a primary path and an alternate path, the primary path being defined from a start node to a destination node, the method comprising:

a processor determining the primary path using a routing algorithm, wherein the primary path includes a protectable segment which has a first line-protected link; and

the processor creating the alternate path using the routing algorithm, wherein creating the alternate path includes creating the alternate path from the start node to the end node, the alternate path arranged to protect at least the protectable segment which includes the first line-protected link;

wherein the primary path is the lowest cost path between the start node and the destination node, and

wherein creating the alternate path using the routing algorithm includes considering costs associated with a plurality of links associated with the network and a cost associated with the first line-protected link, the cost associated with the first line-protected link being lower than the costs associated with the plurality of links

Claim 19 (currently amended) A method for computing an overall circuit path within a network, the overall circuit path including a primary path segment and an alternate path segment, the primary path segment being defined from a start node to a destination node, the method comprising;

a processor determining the primary path segment to include at least one line-protected link between the start node and the destination node;

the processor determining the alternate path segment to start at the start node and end at the destination node, wherein the alternate path segment is arranged to protect the primary path segment that includes the at least one line-protected link;

the processor assigning a cost to the at least one line-protected link;

the processor assigning costs associated to each link of a plurality of links included in a plurality of elements in the primary path, wherein the cost assigned to the at least one line-protected link is lower than the costs associated with each link of the plurality of links; and

the processor considering costs associated with the plurality of links and the cost associated with the at least one line-protected link to create the alternate path.

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Claim 24 (currently amended) A system for computing an overall circuit path within a network, the overall circuit path including a primary path segment and an alternate path segment, the primary path segment being defined from a start node to a destination node, the system having a processor and at least one computer-readable medium storing computer-executable instructions and comprising;

a first set of computer-executable instructions determining the primary path segment to include at least one line-protected link from the start node to the destination node;

and a second set of computer-executable instructions determining the alternate path segment to start at the start node and end at the destination node, wherein the alternate path segment is arranged to protect the primary path segment that includes the at least one line protected link,

wherein the second set of computer executable instructions include:

a first subset of computer-executable instructions assigning a cost to at least one line-protected link;

a second subset of computer-executable instruction assigning costs associated to each link of a plurality of links, wherein the cost assigned to the at least one line-protected link is lower than the costs associated with each link of the plurality of links; and

a third subset of computer-executable instruction considering costs associated with the plurality of links and the cost associated with the at least one line-protected link to determine the alternate path segment.

Claim 28 (currently amended) A system for computing circuit paths from a first node to a second node within a network, the network including a plurality of elements, the system including a processor and at least one computer-readable medium storing computer-executable instructions and comprising:

a first set of computer-executable instructions arranged to enable a determination to be made regarding whether at least one protected link selected from the plurality of elements may be included in a protectable segment of a primary circuit path;

a second set of computer-executable instructions arranged to create a primary circuit path from the first node to the second node which includes at least one protected link when it is determined to include at least one protected link in the protectable segment of the primary path, wherein the second set of computer-executable instructions is arranged to include the at least one protected link in the protectable segment of the primary circuit path;

a third set of computer-executable instructions arranged to create an alternate circuit path from the first node to the second node when it is determined to include the at least one protected link in the protectable segment of the primary path, wherein the alternate circuit path is arranged to protect at least the protectable segment of the primary circuit path;

a fourth set of computer-executable instructions arranged to create a primary circuit path between the first node and the second node which does not include at least

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one protected link when it is determined that at least one protected link may not be included in the protectable segment of the primary path; and

a fifth set of computer-executable instructions arranged to create an alternate circuit path between the first node and the second node, wherein the alternate circuit path is arranged to protect the primary circuit path.

Response to Arguments

2. Applicant's arguments, filed March 18, 2009, with respect to claims 1-9, 11-15, 18-30 have been fully considered and are persuasive. The rejection(s) of claims 1-9, 11-15, 18-30 has been withdrawn.

Allowable Subject Matter

3. Claims 1-9, 11-15, 18-30 are allowed.

4. The following is an examiner's statement of reasons for allowance:

For claims 1-9, the prior art fails to teach or render obvious a combination of:

a first subset of computer-executable instructions assigning a cost to at least one protected link;

a second subset of computer-executable instruction assigning costs associated to each link of a plurality of links included in the plurality of elements, wherein the cost assigned to the at least one protected link is lower than the costs associated with each link of the plurality of links; and

a third subset of computer-executable instruction considering costs associated with the plurality of links and the cost associated with the at least one protected link to determine the alternate circuit path

For claims 11-15 and 18, the prior art fails to teach or render obvious a combination of:

the primary path is the lowest cost path between the start node and the destination_node, and

wherein creating the alternate path using the routing algorithm includes considering costs associated with a plurality of links associated with the network and a cost associated with the first line-protected link, the cost associated with the first line-protected link being lower than the costs associated with the plurality of links

For claims 19-23, the prior art fails to teach or render obvious a combination of:

the processor assigning costs associated to each link of a plurality of links included in a plurality of elements in the primary path, wherein the cost assigned to the at least one line-protected link is lower than the costs associated with each link of the plurality of links; and

the processor considering costs associated with the plurality of links and the cost associated with the at least one line-protected link to create the alternate path

For claims 24-27, the prior art fails to teach or render obvious a combination of:

a first subset of computer-executable instructions assigning a cost to at least one line-protected link;

a second subset of computer-executable instruction assigning costs associated to each link of a plurality of links, wherein the cost assigned to the at least one line-protected link is lower than the costs associated with each link of the plurality of links; and

a third subset of computer-executable instruction considering costs associated with the plurality of links and the cost associated with the at least one line-protected link to determine the alternate path segment

For claims 28-30, the prior art fails to teach or render obvious a combination of:

a fourth set of computer-executable instructions arranged to create a primary circuit path between the first node and the second node which does not include at least one protected link when it is determined that at least one protected link may not be included in the protectable segment of the primary path; and

a fifth set of computer-executable instructions arranged to create an alternate circuit path between the first node and the second node, wherein the alternate circuit path is arranged to protect the primary circuit path.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

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5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to FARAH FAROUL whose telephone number is (571)270-1421. The examiner can normally be reached on Monday - Friday 7:30 AM - 5 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi H. Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Chi H Pham/
Supervisory Patent Examiner, Art
Unit 2416
3/24/09

/Farah Faroul/
Examiner, Art Unit 2416